

IN THE CLAIMS

A listing of all claims and their current status in accordance with 37 C.F.R. § 1.121(c) is provided below.

1 - 21. (Cancelled).

22. (Currently amended) A process for preparing a catalyst slurry and providing the catalyst slurry to a polymerization reaction zone, wherein the process comprises:

forming a catalyst slurry from a ~~dry~~ solid catalyst and a liquid medium;

maintaining the catalyst slurry at ~~an essentially~~ a substantially homogeneous solids-to-liquid ratio;

pumping the catalyst slurry into the polymerization reaction zone;

measuring the flow of the catalyst slurry pumped into the polymerization reaction zone;

and

~~altering the flow of the catalyst slurry pumped into the polymerization reaction zone at least partially in response to the measured flow~~

determining the amount of the solid catalyst fed to the polymerization reaction zone in the catalyst slurry over a selected period; and

altering the flow of the catalyst slurry pumped into the polymerization reaction zone at least partially in response to the measured flow of catalyst slurry and to the determined amount of solid catalyst fed over the selected period.

23. (Currently amended) A process according to claim 22, ~~further~~ comprising substantially continuously agitating the catalyst slurry to maintain the catalyst slurry at an essentially a substantially homogeneous solid-to-liquid ratio prior to pumping the catalyst slurry into the polymerization reaction zone.

24. (Currently amended) A process according to claim 22, ~~comprising for preparing a catalyst slurry and providing the catalyst slurry to a polymerization reaction zone, wherein the process comprises:~~

forming a catalyst slurry from a dry catalyst and a liquid medium;
maintaining the catalyst slurry at a substantially homogeneous solids-to-liquid ratio;
pumping the catalyst slurry into the polymerization reaction zone;
measuring the flow of the catalyst slurry pumped into the polymerization reaction zone;
altering the flow of the catalyst slurry pumped into the polymerization reaction zone at least partially in response to the measured flow; and
pumping a liquid diluent in place of the catalyst slurry into the polymerization reaction zone.

25. (Currently amended) A process according to claim 24, ~~further~~ comprising resuming pumping catalyst slurry into the polymerization reaction zone.

26. (Cancelled).

27. (Original) A process according to claim 22, further comprising operating the polymerization reaction zone to produce solid polymer particles.

28. (Currently amended) A process ~~according to claim 22, further comprising for preparing a catalyst slurry and providing the catalyst slurry to a polymerization reaction zone, wherein the process comprises:~~

transporting the a dry catalyst into the a mixing zone by pneumatic transport;
forming a catalyst slurry from the dry catalyst and a liquid medium in the mixing zone;
maintaining the catalyst slurry at a substantially homogeneous solids-to-liquid ratio;
pumping the catalyst slurry into the polymerization reaction zone;
measuring the flow of the catalyst slurry pumped into the polymerization reaction zone;

and

altering the flow of the catalyst slurry pumped into the polymerization reaction zone at least partially in response to the measured flow.

29. (Currently amended) A process for ~~continuously~~ providing a catalyst slurry ~~generally continuously~~ to a polymerization reaction zone, wherein the process comprises:

introducing a dry catalyst and a liquid medium into a mixing tank to form a catalyst slurry;

agitating the catalyst slurry with one or more impellers in the mixing tank to maintain the catalyst slurry at a substantially homogeneous solid-to-liquid ratio;

feeding the catalyst slurry to a storage tank;

continuously agitating the catalyst slurry in the storage tank so as to maintain the catalyst slurry at ~~an~~essentially a substantially homogeneous solid-to-liquid ratio; and continuously pumping the catalyst slurry substantially continuously into the polymerization reaction zone.

30. (Currently amended) The process of claim 29 wherein the polymerization reaction zone has a plurality of catalyst feeds points spaced to facilitate generally even distribution of the catalyst slurry in the reaction zone.

31. (Currently amended) The process according to claim 29, ~~further~~ comprising monitoring the amount of the catalyst slurry pumped into the polymerization reaction zone, and ~~continuously~~ altering the flow rate of the catalyst slurry pumped into the polymerization reaction zone in response to the monitored amount.

32. (Cancelled).

33. (Currently amended) A process according to claim 29, ~~further~~ comprising operating the polymerization reaction zone to produce solid polymer particles.

34. (Currently amended) A process according to claim 29, ~~further~~ comprising transporting the dry catalyst into the mixing zone tank by pneumatic transport.

35. (Currently amended) A process for continuously feeding catalyst slurry generally continuously to a polymerization reaction zone, wherein the process comprises:

preparing a catalyst slurry of solid catalyst and a liquid medium;

maintaining the catalyst slurry in a plurality of tanks at an essentially a substantially homogeneous solids-to-liquid ratio, wherein the plurality of tanks are maintained at a lower pressure than the polymerization reaction zone; and

pumping the catalyst slurry from at least a first one of the tanks into the polymerization reaction zone.

36. (Currently amended) A process according to claim 35, further comprising: for feeding catalyst slurry generally continuously to a polymerization reaction zone, wherein the process comprises:

preparing a catalyst slurry of solid catalyst and a liquid medium;

maintaining the catalyst slurry in a plurality of tanks at a substantially homogeneous solids-to-liquid ratio; and

pumping the catalyst slurry from a first one of the tanks into the polymerization reaction zone;

detecting the amount of catalyst slurry in the first one of the tanks; and

automatically switching to a second one of the tanks when the amount in the first one of the tanks is at a predetermined level.

37. (Currently amended) A process according to claim 35, comprising for feeding catalyst slurry generally continuously to a polymerization reaction zone, wherein the process comprises:

preparing a catalyst slurry of solid catalyst and a liquid medium;
maintaining the catalyst slurry in a plurality of tanks at a substantially homogeneous solids-to-liquid ratio;
pumping the catalyst slurry from at least one of the tanks into simultaneously introducing the catalyst slurry from the plurality of tanks at a plurality of locations along the polymerization reaction zone.

38. (Currently amended) A process according to claim 35, for feeding catalyst slurry generally continuously to a polymerization reaction zone, wherein the process comprises:

preparing a catalyst slurry of two types of solid catalyst and a liquid medium;
maintaining the catalyst slurry in a plurality of tanks at a substantially homogeneous solids-to-liquid ratio; and
pumping the catalyst slurry from at least one of the tanks into the polymerization reaction zone. wherein two types of catalyst are fed to the polymerization reaction zone.

39. (Original) A process according to claim 35, further comprising operating the polymerization reaction zone to produce solid polymer particles.

40. (Currently amended) The process of claim 35 wherein the reaction zone ~~111 as~~ has a plurality of catalyst feeds spaced to facilitate even distribution of the catalyst slurry.

41. (Cancelled).

42. (Currently amended) A process according to claim 35, ~~further~~ comprising
transporting the ~~dry solid~~ catalyst into ~~the a~~ mixing zone by pneumatic transport.